

I claim:

1. A method for use with a barrier controller having a force control that has a user manipulable setting range having a first end and a second end, comprising:

- 5 - initiating a learning mode;
- operating a motor;
- measuring at least one parameter that corresponds to operation of the motor to provide a parameter value;
- using the parameter value to establish a specific force control value;
- 10 - assigning the specific force control value to a specific location of the user manipulable setting range for the force control.

2. The method of claim 1 and further comprising:

- concluding the learning mode; and
- 15 - using the specific force control value to correlate a particular user manipulated setting to a particular operational force control value.

3. The method of claim 1 and further comprising:

- assigning a maximum force control value to the second end of the
- 20 user manipulable setting range for the force control.

4. The method of claim 3 wherein assigning a maximum force control value to the second end of the user manipulable setting range for the force control includes using the specific force control value to calculate the

25 maximum force control value.

5. The method of claim 3 wherein assigning a maximum force control value to the second end of the user manipulable setting range for the force

control includes using a previously stored maximum force control value.

6. The method of claim 3 wherein assigning a maximum force control value to the second end of the user manipulable setting range for the force control includes using the specific force control value and other previously stored sensitivity control's values to identify the maximum force control value.

7. The method of claim 1 and further comprising disabling at least some barrier controller functions until the learning mode has been initiated at least one time.

8. The method of claim 1 and further comprising enabling at least one barrier control function upon concluding the learning mode.

9. The method of claim 1 and wherein initiating the learning mode includes actuating a user manipulable learning mode initiation switch.

10. The method of claim 9 wherein actuating the user manipulable learning mode initiation switch includes using a tool to access the user manipulable learning mode initiation switch.

11. The method of claim 1 wherein operating the motor includes operating the motor in a substantially unloaded operating state.

12. The method of claim 1 wherein operating the motor includes operating the motor in an ordinary loaded operating state.

13. The method of claim 1 wherein measuring at least one parameter that corresponds to operation of the motor includes measuring a parameter that corresponds to speed of rotation of a drive axle of the motor.

5 14. The method of claim 13 wherein measuring a parameter that corresponds to speed of rotation of a drive axle of the motor includes measuring speed of rotation of the drive axle of the motor.

10 15. The method of claim 13 wherein measuring a parameter that corresponds to speed of rotation of a drive axle of the motor includes measuring speed of rotation of a rotating member that has a speed of rotation that varies with respect to speed of rotation of the drive axle of the motor as a function of a gear ratio.

15 16. The method of claim 1 wherein measuring at least one parameter that corresponds to operation of the motor includes measuring a parameter that corresponds to speed of movement of a barrier that is operably coupled to the motor.

20 17. The method of claim 1 and further comprising providing a visual signal to indicate initiation of the learning mode.

25 18. The method of claim 1 wherein measuring at least one parameter that corresponds to operation of the motor to provide a parameter value includes sensing electric pulses that correspond to operation of the motor.

19. The method of claim 18 wherein measuring at least one parameter that corresponds to operation of the motor to provide a parameter value

further includes counting the electric pulses over a predetermined period of time to obtain an average number of pulses per window of time.

5 20. The method of claim 1 wherein using the parameter value to establish a specific force control value includes assigning the parameter value as the specific force control value.

10 21. The method of claim 1 wherein using the parameter value to establish a specific force control value includes modifying the parameter value in a predetermined way to provide a modified parameter value and assigning the modified parameter value as the specific force control value.

15 22. The method of claim 1 and further comprising assigning other force control values to other settings of the user manipulable setting range for the force control.

20 23. The method of claim 22 wherein assigning other force control values to other settings of the user manipulable setting range for the force control includes assigning the force control values to thereby establish a linear relationship between the assigned force control values with respect to the other settings of the user manipulable setting range.

25 24. The method of claim 22 wherein assigning other force control values to other settings of the user manipulable setting range for the force control include assigning the force control values to thereby establish a non-linear relationship between the assigned force control values with respect to the other settings of the user manipulable setting range.

25. The method of claim 1 wherein assigning the specific force control value to a specific location of the user manipulable setting range for the force control includes assigning the specific force control value to the first end of the user manipulable setting range for the force control.

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26. The method of claim 25 and further comprising assigning a maximum force control value to the second end of the user manipulable setting range for the force control.

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27. The method of claim 25 and further comprising using the specific force control value to calculate a maximum force control value.

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28. The method of claim 27 wherein using the specific force control value to calculate a maximum force control value includes adding to the specific force control value and amount substantially equal to 10 percent of the specific force control value.

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29. The method of claim 27 and further comprising assigning the maximum force control value to the second end of the user manipulable setting range for the force control.

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30. A method for use with a movable object having a user manipulable force control that has a mechanical setting range having a lower limit and an upper limit, comprising:

- initiating a learning mode;
- automatically operating a motor for at least a predetermined period of time;
- measuring at least one parameter that corresponds to operation of

the motor to provide a parameter value;

- using the parameter value to establish a specific force control value;
- assigning the specific force control value to a specific location of the mechanical setting range for the force control.

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31. The method of claim 30 wherein automatically operating a motor includes automatically operating the motor under predetermined operating conditions.

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32. The method of claim 31 wherein automatically operating the motor under predetermined operating conditions includes automatically operating the motor under one of:

- a substantially unloaded operating condition; and
- an ordinarily loaded operating condition.

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33. The method of claim 30 wherein measuring at least one parameter that corresponds to operation of the motor includes measuring at least one parameter that corresponds to rotational output of the motor.

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34. The method of claim 30 wherein assigning the specific force control value to a specific location of the mechanical setting range for the force control includes assigning the specific force control value to the lower limit of the mechanical setting range for the force control.

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35. The method of claim 30 and further comprising using the specific force control value to identify other force control values.

36. The method of claim 35 and further comprising assigning at least

some of the other force control values to specific locations of the mechanical setting range for the force control.

37. A method comprising:

- 5 - initiating a learning mode;
- automatically operating a device in response to initiating the learning mode;
- automatically measuring at least one parameter that corresponds to operation of the device to provide a parameter value;
- 10 - automatically using the parameter value to establish a specific control value;
- automatically assigning the specific control value to a specific location of a mechanical setting range for a control device;
- concluding the learning mode.

38. A barrier controller for use with a movable barrier, a motor operably coupled to move the movable barrier in response to commands from the barrier controller, and a sensor for sensing at least one parameter that corresponds to operation of the motor, the barrier controller comprising:

- 20 - a force control having a setting range; and
- a programmable controller that is programmed to:
 - operate the motor during a learning mode;
 - receive information regarding the at least one parameter from the sensor during the learning mode;
 - 25 - using the information to establish a specific force control value during the learning mode; and
 - assigning the specific force control value to a specific location of the mechanical setting range of the force control.

39. The barrier controller of claim 38 wherein the barrier controller further comprises learning mode actuation means for at least initiating the learning mode.

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40. A barrier controller for use with a movable barrier, a motor operably coupled to move the movable barrier in response to commands from the barrier controller, and a sensor for sensing at least one parameter that corresponds to operation of the motor, the barrier controller comprising:

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- force control means having a setting range for providing a signal that corresponds to a force control value;

- learning means for initiating a learning mode;

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- operation means responsive to the learning means and operably coupled to the motor to cause operation of the motor during the learning mode;

- measurement means responsive to the sensor for measuring the at least one parameter during the learning mode;

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- determination means responsive to the measurement means for using at least one measurement of the at least one parameter to establish a specific force control value;

- assignment means responsive to the determination means for assigning at least the specific force control value to a specific location of the setting range of the force control means.

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41. The barrier controller of claim 40 wherein the determination means further determines other force control values.

42. The barrier controller of claim 41 wherein the assignment means

further assigns at least some of the other force control values to specific locations of the setting range of the force control means.

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T00E11-2582660